

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES 1   8	
2. AMENDMENT/MODIFICATION NO. 0005		3. EFFECTIVE DATE 21-Aug-2004		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO.(If applicable)	
6. ISSUED BY AFGHANISTAN ENGINEER DISTRICT US ARMY CORPS OF ENGINEERS KABUL APO AE 09356		CODE W917PM		7. ADMINISTERED BY (If other than item 6)  <b>See Item 6</b>		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				X		9A. AMENDMENT OF SOLICITATION NO. W917PM-04-R-0012	
				X		9B. DATED (SEE ITEM 11) 28-Jul-2004	
						10A. MOD. OF CONTRACT/ORDER NO.	
						10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.							
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).							
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
D. OTHER (Specify type of modification and authority)							
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Amendment number 5 as per continuation sheet							
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				TEL: _____ EMAIL: _____			
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA  BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED  21-Aug-2004	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

(End of Summary of Changes)

CONTRACT W917PM-04-R-0012  
DESIGN AND CONSTRUCTION OF THE REHABILITATION OF THE KANDAHAR AIRFIELD (KAF)  
KANDAHAR, AFGHANISTAN

CHANGES TO RFP

**SPECIFICATION SECTION 1699911, APPENDIX A SURVEY  
AND MAPPING**

1. **ADD** "Specification Section 1699911" to solicitation:

**Section 1699911**  
**APPENDIX A**  
**Survey and Mapping**

**TOPOGRAPHIC SURVEY**

1. GENERAL

The contractor shall provide all labor, material and equipment necessary to perform the professional surveying and mapping. The contractor shall furnish the required personnel, equipment, instrumentation, and transportation as necessary to accomplish all required services and furnish to the government detailed maps, digital terrain data, and other data with supporting material developed during the field data acquisition and compilation process. During the prosecution of the work, the contractor shall provide adequate professional supervision and quality control to assure the accuracy, quality, completeness, and progress of the work.

1.2 LOCATION OF WORK

Topographic mapping and related surveying services will be performed to provide the contractor with enough information to properly design the project in accordance with the Technical Requirements, Section 169991.

### 1.3 TECHNICAL CRITERIA AND STANDARDS

The following standards are referenced in this guide.

#### USACE EM 1110-1-1005 TOPOGRAPHIC SURVEYING

### 1.4 WORK TO BE PERFORMED

Professional surveying and mapping and related services to be performed under this contract are defined below. Unless otherwise indicated in this contract each required service shall include field-to-finish effort. All mapping work will be performed using appropriate instrumentation and procedures for establishing control, field data acquisition, and compilation in accordance with the functional accuracy requirements to include all quality control associated with these functions. The work will be accomplished in strict accordance with surveying and mapping criteria contained in the technical references except as modified or amplified herein.

#### 1.4.1 PURPOSE OF WORK

Surveys are for project to design an aircraft runway, apron and associated taxiways. Contractor is responsible to obtain all information necessary for the design.

#### 1.4.2 FIELD PROCEDURES AND REQUIREMENTS

Appropriate instrumentation and procedures, consistent with accepted professional surveying and mapping industry standards and practice, shall be selected to achieve the accuracy standards required. The contractor shall field a fully equipped survey crew(s), consisting of professional survey personnel, experienced in performing the required surveys and capable of completing the work within allotted schedules. All field observational data required to set and establish project control shall be recorded in standard permanent bound field books which will subsequently be delivered to the government. All survey work shall be performed under adequate supervision and quality control measures. All survey work, including office computations and adjustments, is subject to government review and approval for conformance with prescribed accuracy standards. Deficiencies will be recognized and steps to initiate corrective actions shall be taken as required. The contractor shall allow direct contact with responsible-in-charge personnel for each phase of the work for purposes of progress estimates and compliance with the contract requirements.

1.4.2.1 Horizontal control shall reference existing project area control. Controlling points shall be occupied as a station

within a closed traverse that will meet or exceed third order, Class I relative accuracy classification. The traverse shall initiate and close upon acceptable control monumentation used to establish the existing project grid system. All grid coordinates shown on the map products shall be expressed in or converted to, meters. Coordinates shall be referenced to the local datum in use at the base.

1.4.2.2 Vertical control shall be established within a closed level loop that will meet or exceed third order, accuracy standards. Elevations shall originate and close on acceptable benchmarks in the project area. Unless otherwise indicated, initiating and closing the level loop on the same benchmark shall not constitute an acceptable control circuit.

#### 1.4.2.3 EXISTING PROJECT/NETWORK CONTROL

A tabulation and/or description of existing project/network control points will be provided by the contracting officer. Prior to using any control points, the monuments should be checked to ensure that they have not been moved or disturbed.

### 1.5. MAP COMPILATION, DRAFTING, AND CADD SPECIFICATIONS

#### 1.5.1 MAP COMPILATION SCALE

The contractor shall furnish finished maps at a scale of 1:500.

#### 1.5.2 TOPOGRAPHIC AND PLANIMETRIC FEATURES

The maps shall contain all topographic and planimetric features encountered within the project limits. The maps shall properly depict the existing site conditions as necessary for the proper use of their intended purpose. The final mapping product generated by the contractor shall comply with and contain but not be limited to the following:

a. **TERRAIN FEATURES/CONTOUR DEVELOPMENT.** The contour interval for this project is 0.25 meters. Contours shall be legible and drawn sharp and clear. Every fourth contour (index contour) shall be accentuated as a heavier line than the intermediate three. Labeling or

numbering of contours shall be placed so the elevations are readily discernible. Labeling of intermediate contours may be required in areas of relief.

(1) Turning points that define drainage channels, ditches, etc., shall be consistent in depicting correct alignment and direction of drainage.

(2) Spot elevations shall be established and shown on the maps at water surfaces of shorelines or lakes, reservoirs, ponds, and the like; high and low points at hilltops and depressions; at intersections and along center lines of streets and, where applicable, top curb and gutter; at tops and bottoms of vertical walls and other structures; and at center line of end of bridges. Ground spot elevations shall sufficiently supplement contoured elevations and shall not exceed 3 cm target scale. Pavement spot elevations shown on the map sheets shall be accurate to 3 mm.

(3) Digital terrain model (dtm) generation. Digital elevation models (dem) shall be generated by grid or trace controlling methods on a network of random points supplemented with break-line points to properly establish the terrain model. Contours will be generated using standard dtm/cadd application software.

b. **PLANIMETRIC FEATURE DATA DETAILING.** The maps shall contain all planimetric features encountered within the project limits and compatible with the type of project involved. These shall include, but not be limited to, buildings; roads; sewers service lines; utility systems, surface and subsurface including all appurtenances, such as communication, gas, water, fuel, electric, telephone, overhead powerlines, transmission; storm drainage features and structures, bridges, culverts, piers, spillways, channel systems; timbered areas, landscapes and individual trees that are recognized as such; recreation areas; cemeteries, etc.

(1) Surface utility data. Locate and identify all culverts (pipes or box drains); water systems including valves and meter; catch basin inlets and outlets; manholes (storm, sanitary, telephone, gas, electric); meter/valve boxes; overhead power pole location and type; low wire heights; overhead towers; and transformers.

(2) Subsurface utility data. For known subsurface utilities, show all systems and appurtenances. Provide pipe/conduit alignment, type, size, junction points, etc.; obtain top and invert elevations of all sanitary sewers.

### 1.5.3 FINAL SITE PLAN MAPS AND/OR DIGITAL DATA CONTENTS

a. Coordinate grid. Grid ticks shall be placed on the map sheets at 50 m intervals with coordinate values properly annotated and shown at the top and right edge of each map sheet.

b. Multiple map sheets shall contain an index of the sheet layout oriented north to each sheet. Match lines/match grid shall be provided and properly labeled such that each sheet may be joined accurately to adjacent sheets.

c. The title block, sheet index, and legend shall be placed on the map sheets to the designated size and arrangement. The title block shall include the name of the contracting agency, project name, date, scale, and name of the contractor performing the work.

d. All design files with supporting data shall be furnished. The format specified will be dependent on the operating system of the design workstation. The level assignments, color, line weights, and line styles shall be as shown in table 1.

e. Completed maps, reproductions, compilation data, digital data shall be delivered in accordance with the work order requirements.

## 1.6 QUALITY CONTROL AND ASSURANCE STANDARDS

### 1.6.1 CONTRACTOR QUALITY CONTROL

#### a. GENERAL

All final mapping data submitted under this contract shall conform to the accuracy standards outlined in EM 1110-1-1005 unless modified or supplemented below. The contractor shall be responsible for all internal quality control functions for all phases of the work as required to assure the completeness and accuracy of final compiled maps.

#### b. MATERIALS

All materials, supplies, or articles required for work that are not covered herein, shall be standard products of reputable manufacturers, and entirely suitable for the intended purpose. Unless otherwise specified, they shall be new and unused and subject to the approval of the contracting officer.

#### c. METHODS FOR EVALUATING MAP ACCURACY

All maps compiled shall be subject to map testing by the

government or by independent third-party forces, to ensure that they comply with the applicable accuracy requirements stated in the contract. The map test results will be statistically evaluated relative to the defined accuracy criteria, and pass/fail determination made accordingly. The decision of whether or not to perform rigid map testing on any project or portion of a project rests with the contracting officer. In all cases, the contractor will be advised in writing when such action will be taken.

**TABLE 1****Survey/Mapping Level Assignments and Level Symbology**

<b>Line</b>					
<b>Level</b>	<b>Description</b>	<b>Code</b>	<b>Weight</b>	<b>Color</b>	
1	Sheet Dependent Information	0	0	2	
2	Coordinate Grid/Tics	0	0	2	
3	Coordinate Grid Annotation/Text	0	0	4	
4	Buildings	0	0	4	
5	Building Annotation	0	0	4	
6	Road Centerline	0	0	4	
7	Road, RR and Centerline Anno.	0	0	4	
8	Roads, RR, Parking, Walks, Trls.	0	1	4	
9	Concrete Joint Layout	0	0	4	
10	Concrete Joint Elevations	0	0	4	
11	Runway, Taxiway and Aprons	0	1	5	
12	Runway Annotation	0	0	5	
13	Pavement Markings, Signs	0	0	5	
14	Structures, Headwalls	0	1	6	
15	Structure Annotation	0	0	6	
16	Culverts	0	1	6	
17	Culvert Annotation	0	0	6	
18	Riprap	0	1	2	
19	Water Features	0	1	1	
20	Water Features Annotation	0	0	1	
21	Vegetation	0	0	2	
22	Vegetation Annotation	0	0	2	
23	Fences	0	0	1	
24	Fence Annotation	0	0	1	
25	Boundary Lines/Cadastral	0	2	6	
26	Boundary Lines/Cad. Annotation	0	0	6	
27	Survey Control Pts, Baselines	0	0	5	
28	Survey Control Point Annotation	0	0	5	
29	Break Lines	0	0	4	
30	Spot Elevations	0	0	4	
31	Major Contours	3	2	6	
32	Contour Annotation	0	0	6	
33	Minor Contours	2	0	3	
34	Minor Contour Annotation	0	0	3	
35	Storm Sewer Lines & Manholes	0	0	2	

36	Storm Sewer Annotation	0	0	2	
37	Sanitary Sewer Lines & Manholes	0	0	4	
38	Sanitary Sewer Annotation	0	0	4	
39	Water Lines, Tanks, & Fire Pumps	0	0	1	
40	Water Systems Annotation	0	0	1	
41	Gas Lines, Features & Valves	0	0	3	
42	Gas System Annotation	0	0	3	
43	Power Lines, Lts. & Tele. Poles	0	0	4	
44	Power System Annotation	0	0	4	
45	Steam Lines, Features, Valves	0	0	5	
46	Steam System Annotation	0	0	5	
47	Cross Section & Profiles	0	0	4	
48	Details, Inserts	0	0		
49	Soundings	0	0	1	
50	Channel Lines & Disposal Areas	0	1	4	
51	Channel Line Annotation	0	0	4	
52	Navigation Aids and Annotation	0	1	6	
53	Levees, Dikes and Annotation	0	1	4	
54	Pipe Lines, Structures, Bridges	0	1	6	
55	Pipe Line Annotation	0	0	6	
56	Stationing and Mile Markers	0	1	5	
57	Revetments & Annotation	0	0	2	
58	Vessel Track Line	0	1	2	
59	Legend	0			
60	Concentrated Spot Elevations	0	0	4	
61	Unassigned	0			
62	Unassigned	0			
63	Documentation	0			